

1    **ABSTRACT OF THE DISCLOSURE**

2           A power redundant power system and a method for controlling the  
3   power system are presented, wherein the power system is composed of at least  
4   one inverter for supplying AC power to a load through a bus, a phase lock system  
5   to synchronize all output voltages of the inverters and a current sharing circuit to  
6   properly distribute the load current among all inverters. Each inverter is  
7   controlled by an unbalanced power to limit the increase of its cross current.  
8   Moreover, the information related to DC bus voltage is further applied to control  
9   the inverters, whereby the cross current is mitigated and entire power system is  
10  operated steadily.